



DEPARTMENT OF HEALTH AND HUMAN SERVICES

Office of the Secretary

Findings of Research Misconduct

AGENCY: Office of the Secretary, HHS.

ACTION: Notice.

SUMMARY: Notice is hereby given that the Office of Research Integrity (ORI) has taken final action in the following case:

Dr. Igor Dzhura, Vanderbilt University: Based on an inquiry conducted and admission obtained by Vanderbilt University (VU) and additional analysis conducted by ORI in its oversight review, ORI found that Dr. Igor Dzhura, former Senior Research Associate, Department of Biomedical Engineering, VU, engaged in research misconduct in research supported by U.S. Public Health Service (PHS) funds, specifically National Heart, Lung, and Blood Institute (NHLBI), National Institutes of Health (NIH), grants R01 HL070250, R01 HL062494, P01 HL046681, and K08 HL03727, National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS), NIH, grant R01 AR044864, National Institute of Mental Health (NIMH), NIH, grant R01 MH063232, National Institute of Allergy and Infectious Diseases (NIAID), NIH, grant U01 AI06223, and National Cancer Institute (NCI), NIH, grant U54 CA113007.

ORI found that Respondent engaged in research misconduct by providing falsified and/or fabricated data to his supervisor and colleagues. Specifically, Respondent:

- submitted falsified cytosolic calcium buffering experiments to his research supervisor by misrepresenting apparent action potential traces; these actually were fluorescent calcium transients merged with sodium calcium exchange currents from a different experiment; Respondent admitted to falsely claiming ten replicates for each trace when only testing three to five cells
- falsified sodium calcium exchange (NCX) activity in Very Long Chain Acid Dehydrogenase Deficient (VLCAD) mice versus wild type mice in a PowerPoint presentation by falsely labeling and manipulating NCX data from a different experiment testing an unrelated compound; the effect was to falsely claim a difference in NCX activity between the two mouse phenotypes
- provided a falsified Figure 6C in a manuscript submitted to *Nature Cell Biology*, while claiming that the data were based on Respondent's memory of his data that had purportedly been collected and lost; Respondent claimed to have tested one hundred fifty (150) cells for their action potential characteristics when the experimental record only accounted for approximately twenty (20).

ORI found that Respondent engaged in research misconduct by falsifying and/or fabricating the research record of patch-clamp data. Specifically, Respondent:

- created a hierarchy of computer folders containing duplicated and renamed files; the falsified groups of files included eighty-two (82) groups of duplicated files with each group containing two to twenty-one (2-21) duplicates, which made it appear that experiments were conducted when they were not
- used the falsified and/or fabricated data files in Figure 6 of a paper published in the American Journal of Physiology-Heart and Circulatory Physiology (292(5):H2202-H2211, 2007), to represent Ca<sup>+</sup> currents in cardiac myocytes from CLCAD<sup>-/-</sup> mice; specifically, Respondent claimed that Figure 6 represented results from seven (7) mice when the data files were three (3) sets of duplicated and renamed files plus one additional data file. All of the data files were part of larger groups of identical duplicated and renamed data files on the Respondent's hard drive.
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ORI found that Respondent engaged in research misconduct by submitting and publishing multiple falsified and/or fabricated action potential traces and summary data in at least sixty-nine (69) images in twelve (12) different figures across seven (7) publications and three (3) grant applications by duplication and relabeling of traces; resizing, modifying, and splicing different traces; and modifying and/or duplicating bar graphs.

The evidence established that Respondent engaged in research misconduct, as defined by the PHS regulation, in that he significantly departed from accepted research practices by engaging in the intentional and knowing fabrication and falsification of data files.

Dr. Dzhura has entered into a Voluntary Exclusion Agreement (Agreement) and has voluntarily agreed for a period of three (3) years, beginning on October 29, 2014:

- (1) to exclude himself from any contracting or subcontracting with any agency of the United States Government and from eligibility or involvement in nonprocurement programs of the United States Government referred to as “covered transactions” pursuant to HHS’ Implementation (2 CFR part 376 *et seq*) of OMB Guidelines to Agencies on Governmentwide Debarment and Suspension, 2 CFR part 180 (collectively the “Debarment Regulations”);
- (2) to exclude himself from serving in any advisory capacity to PHS including, but not limited to, service on any PHS advisory committee, board, and/or peer review committee, or as a consultant; and
- (3) to retract or correct the following publications:
  - *Nature Cell Biology* 2:173-177, 2000
  - *J. Physiol.* 535(3):679-687, 2001
  - *Circulation* 106:1288-1293, 2002

- *J. Physiol.* 545(2):399-406, 2002
- *J. Physiol.* 550(3):731-738, 2003
- *FASEB J.* 19:1573-1585, 2005
- *Molecular Cell* 23:641-650, 2006

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FOR FURTHER INFORMATION CONTACT:

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